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## INTERGLACIAL MAN FROM EHRINGSDORF NEAR WEIMAR

By GEORGE GRANT MACCURDY

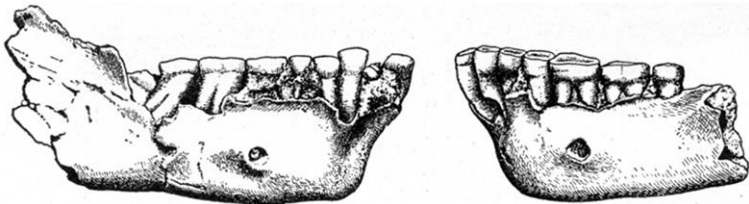
THE attention of prehistoric archeologists has long been turned toward the region of Weimar, Germany, because of important discoveries made at Taubach and Ehringsdorf, both in the Ilm valley. Known since 1871, the station of Taubach (back of the village of that name) was systematically explored between 1876 and 1880. The deposits at Taubach and Ehringsdorf are alike. Their basis is a layer of sand and gravel dating from the third or Riss glacial epoch (Obermaier). Above this is lower travertine with remains of the mammoth and woolly rhinoceros near the bottom, and those of *Elephas antiquus* and *Rhinoceros merckii*, both witnesses of a warm climate, near the top. Next above at Ehringsdorf comes the so-called "Pariser" (corruption from Poröser) deposit, a kind of loess. Higher still is a deposit of upper travertine with remains of the stag and woolly rhinoceros; curiously enough the *Rhinoceros merckii* also occurs at this level.

The human remains in question, consisting of a nearly complete human lower jaw, form the subject of a paper just published by Professor G. Schwalbe<sup>1</sup> of Strassburg. Professor Hans Virchow was to have given a demonstration of the specimen before the German Congress of Anthropology at Hildesheim last August, but the Congress was not held on account of the war. The discovery was first brought to my attention through a letter from Dr L. Pfeiffer of Weimar under date of July 20, 1914. Like much of the archeological material previously found at Taubach and Ehringsdorf, the lower jaw is now the property of the Museum at Weimar. Because of its double association with that city, Schwalbe proposes to call it the Weimar lower jaw.

<sup>1</sup> Über einen bei Ehringsdorf in der Nähe von Weimar gefundenen Unterkiefer des *Homo primigenius*. *Anat. Anzeiger*, Band 47, 337-345, 1914.

The lower jaw was found on May 8, 1914, at a depth of 11.9 m. below the surface in the lower travertine, 2.9 m. below the so-called Pariser loess. It is from the Kämpfe quarry at Ehringsdorf and was brought to light by means of a blast. Under the circumstances it was fortunate indeed that the lower jaw suffered no worse. All the teeth are intact and in situ save the two right incisors (in their place is a small mass of travertine containing a univalve shell). Both halves of the body are practically complete. The right ascending ramus is in part present; although not enough remains to save the mandibular angle, the coronoid and condyloid processes, and the mandibular or sigmoid notch. The left ascending ramus is completely gone.

A number of remarkable features are combined in the Weimar lower jaw. The absence of a chin is doubly emphasized because of the pronounced alveolar prognathism (figs. 35, 36), a condition



FIGS. 35, 36.—Right and left profiles of the Weimar lower jaw. After Schwalbe. ( $\frac{1}{2}$ )

not found in the lower jaws of Krapina and La Chapelle-aux-Saints, nor even in that of *Homo heidelbergensis*. Closely related to the alveolar prognathism is the sloping nature of the inner surface of the jaw in the region of the symphysis, the region called by Schwalbe planum alveolare. In all other lower jaws of the Neandertal type a median line in this field is much more nearly vertical. Below this planum alveolare is a spinous area, but no distinct spines for the attachment of the genioglossal and geniohyoid muscles. Neither is there the customary ridge on the inner surface of each corpus for the attachment of the mylohyoid muscles. The absence of this mylohyoid ridge is even more marked than in the well-known mandibles of the Neandertal type.

The foramen mentale (see figs. 35, 36) is unusually large. It

is directly beneath the first molar (similar to the situation in *Homo primigenius*); while in recent man this foramen is situated farther forward beneath the second premolar. In the Heidelberg lower jaw it is also large, but is situated farther forward than in the specimen from Weimar.

Schwalbe lays special stress on the narrowness of the arch of the Weimar jaw. The breadth between the inner faces of the third molars is 48 mm.; the distance from posterior surface of the third molar to the anterior margin of the median incisor is 69 mm. The index derived from these two measures in the Chimpanzee is 54.6. In the Weimar jaw this index is 69.5; while it is much larger in other known fossil human lower jaws: Heidelberg 75.7, Krapina 80, and La Chappelle 100. Schwalbe admits, however, that the low index of the Weimar jaw might be due in part at least to post-mortem deformation.

The teeth are much worn (fig. 37). Since the premolars are less worn than the canines, one is led to conclude that the points of the canines stood above the level of the premolars. There

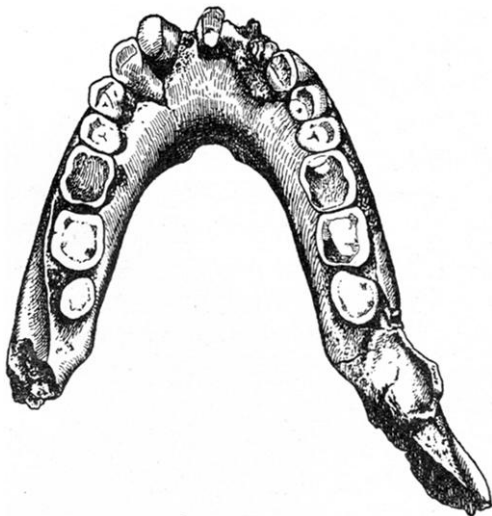


FIG. 37.—The Weimar lower jaw. After Schwalbe. ( $\frac{2}{3}$ )

is no diastema between the canines and the first premolars. A notable feature is the relative smallness of the third molars. This unexpected condition proves that the tendency of the third molars to disappear is of much more ancient origin than other known jaws of the Neandertal and earlier types have led us to suppose.

Without hesitation Schwalbe places the Weimar lower jaw in the Neandertal group, for which group he proposed some years ago the

name *Homo primigenius*. In the preliminary paper he does not describe the cultural remains found at the same level. He does, however, mention some of the numerous accompanying fauna: *Rhinoceros merckii*, stag, horse, ox, and cave bear. There was also an abundance of charcoal and flint implements, the latter for the greater part apparently retouched points and scrapers.

Two human teeth (one of a child and one of an adult) had already been found in the lower travertine of Taubach. During the summer of 1908 Dr Pfeiffer found human skull fragments in the same deposits at Ehringsdorf.

Both Obermaier and Schmidt consider the lower travertine of Ehringsdorf (the deposit in which the lower jaw was recently found) and Taubach to be older than Mousterian. Although it contains no typical coups de poing, on account of the character of the fauna as well as of the industry, Obermaier would call the deposit of Chellean age. For Schmidt, who has recently published examples of the industry, it is Acheulian.

In any case, all are evidently agreed that the deposit belongs to the Riss-Würm interglacial epoch. In that case, according to one school it might be Chellean, Acheulian, or early Mousterian; according to the school of Penck, it would have to be later Mousterian, since he places early Mousterian during the Riss glacial epoch and the Chellean-Acheulian during the second or Mindel-Riss interglacial epoch.

Whichever view is correct, on account of its anatomical characters as well as the position of the deposit and the nature of the associated cultural and faunal remains, the anthropologist may justly claim for the Weimar lower jaw an antiquity surpassed perhaps only by the skull of Piltdown and the Mauer (*Homo heidelbergensis*) lower jaw.

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